

**REMARKS**

Claims 1, 5-14, 17-18, 26-34 and 36-38 are pending in the present application. No claims have been amended and no claims have been cancelled as a result of this response. Claims 6, 8-14, 26-34 and 37 are withdrawn. Claims 1, 6, 9, 13, 14 and 26 are independent claims.

**Claim Rejection – 35 U.S.C. § 103(a) Over Martin, Krokstad, and Hershbarger**

Claims 1, 5, 7, 17, 18, 36 and 38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin (US Patent 5,796,848) in view of Krokstad et al. in further view of Hershbarger et al. (US Patent 5,654,984). This rejection, is as so far as it pertains to the presently pending claims, is respectfully traversed for the following reasons.

The Examiner asserts that Martin discloses a microphone assembly of a hearing aid including a microphone housing 6 further including a sound inlet 15 and a microphone 1 for receiving acoustic waves through the sound inlet 15 and for converting received acoustic waves to analog signals. The Examiner further asserts that Martin discloses that the microphone 1 is positioned within the microphone housing 6. The Examiner further asserts that Martin discloses an electronic circuit positioned within the microphone assembly casing 6, the electronic circuit forming a signal path defined by a cascade of a pre-amplifier 8 for amplifying the analog signals from the microphone 1 and a sigma-delta modulator 7 for providing digital signals.

The Examiner admits that Martin fails to disclose a microphone assembly further comprising a filter in the signal path between the pre-amplifier 8 and the sigma-delta modulator 7.

The Examiner further asserts that Figure 5A of Krokstad illustrates a filter<sup>13a</sup> between a pre-amplifier 11a and an analog to digital converter ADC in order to deconvolve an input signal for a given frequency range.

The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to:

“include a filter between the pre-amplifier and the sigma-delta modulator in order to deconvolve a specified frequency range of audio signal to be processed by the analog to digital converter as disclosed by Krokstad.”

The Examiner further admits that the Martin/Krokstad combination does not disclose that the filter means prevents low frequency components from reaching the sigma-delta modulator.

The Examiner asserts that Hershbarger discloses a sigma-delta modulator and teaches that a band limiting low pass filter is placed before the modulator to prevent aliasing of the signal. The Examiner then concludes that it would have been obvious of one ordinary skill in the art at the time the invention was made to include a filter to remove low frequency components in order to prevent aliasing as taught by Hershbarger.

Applicant respectfully submit that the mere fact that the various portions of Applicant’s invention are known in the art is insufficient to support a rejection under 35 U.S.C. § 103. It is well established that the mere fact that the elements in the claimed combination are old is irrelevant to the obviousness inquiry under 35 U.S.C. § 103(a). As explained by the Board of Appeals and Interferences;

In the instant application, the Examiner has done little more than cite references to show that one or more elements or some combinations thereof, when each is viewed in a vacuum, is known. The claimed invention, however, is clearly directed to a combination of elements. That is to say, that appellant does not claim that he has invented one or more new elements but has the conclusion that the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed

combination or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. The Board found nothing in the references that would expressly or impliedly teach or suggest the modifications urged by the Examiner. Additionally, the Board found no line of reasoning in the answer as to why the artisan would have found the modifications urged by the Examiner to have been obvious. Based on the record, the artisan would not have found it obvious to selectively pick and choose elements or concepts from the various references so as to arrive at the claimed invention without using the claims as a guide.

Ex Parte Clapp, 227 U.S.P.Q. 972 (B.P.A.I. 1985). Thus, unless Applicants' claimed combinations are suggested in the art (they are not), the fact that various elements in the combination might be individually found in the prior art does not provide support for a 35 U.S.C. § 103 rejection.

Accordingly, Applicants respectfully submit that claims 1, 5, 7, 8, 36, 37 and 38, are allowable for at least this reason.

Further, Applicants will respectfully illustrate that the various references relied upon by the Examiner cannot be combined for the following reasons.

The CFAC has stated that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is a rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. In re Dembicza, 50 U.S.P.Q. 1614 (Fed. Cir. 1999). Evidence of a suggestion, teaching or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or in some cases, from the nature of the problem to be solved.

#### The Prior Art Themselves

Applicants have been unable to find, and the Examiner has not even asserted, that any particular portion of Martin, Krokstad, or Hershbarger, specifically point to any of the other references relied upon in the 35 U.S.C. § 103(a) rejection.

Accordingly, Applicants respectfully submit that the Examiner has failed to establish that the prior art themselves provide motivation to combine.

Knowledge of One of Ordinary Skill in the Art

As suggested in Dembiczak, another source for suggestion, teaching, or motivation could be the knowledge of one of ordinary skill in the art. Regardless of the source, the Examiner is still required to provide actual evidence. In particular, the showing must be clear and particular. Broad conclusory statements regarding the teaching of multiple references, standing alone are not evidence. Broad denials and conclusory statements are not sufficient to establish a genuine issue of material fact. Dembiczak at 1617.

The Examiner has not provided any declaration evidence with regard to the knowledge of one of ordinary skill in the art. Accordingly, Applicants respectfully submit that the Examiner has failed to establish that motivation to combine may flow from the knowledge of one of ordinary skill in the art.

Nature of the problem to be Solved

Martin discloses a digital hearing aid which solves the problem of suppressing penetration of external high frequency electromagnetic waves. Martin does so by providing a method of forming a hearing aid housing of at least two electrically conductive parts connected to one another in an electrically conductive fashion via a high-frequency seal.

Krokstad is directed to programmable hybrid hearing aid with digital signal processing that facilitates the optimum adaptation of an auditory signal, depending on the wearer's hearing residue. In particular, Krokstad provide optimum processing which recognizes that although the wearer may be fairly deaf with respect to high frequency signals,

the wearer may be able to hear low frequency sounds. As a result, the Krokstad hearing aid optimizes the hearing residue of the wearer and simultaneously optimizes the hearing aid response function.

Hershbarger et al. provides high-voltage isolation between electrically circuits operating on different voltages in a manner which avoids bulky transformers or capacitors.

Applicants respectfully submit that the problem being solved by Hershbarger is totally irrelevant to the problem being solved by Martin and Krokstad.

Applicants respectfully assert that Hershbarger's irrelevance is indicated by its classification in IPC class H04B 3/00, whereas Martin and Krokstad are both characterized as IPC class H04R 25/00. Accordingly, Applicants respectfully submit that Hershbarger is not combinable with Martin or Krokstad, for at least this additional reason.

Additionally, Applicant respectfully submit that the problem being solved by Martin is the suppression of the penetration of external high frequency electromagnetic waves. In contrast, Figure 4 of Hershbarger illustrates a high pass filter 401, prior to sigma-delta modulator 402. As a result, Hershbarger is interested in passing high frequency component to sigma-delta modulator 402 whereas Martin attempts to teach exactly the opposite, namely suppressing high frequency signals.

Accordingly, Applicants respectfully submit that the Examiner's motivation is deficient for at least this additional reason.

For the reasons set forth above, Applicants respectfully submit that the various references relied upon by the Examiner do not explicitly teach their combination, do not solve the same problem, and therefore are not combinable, and there is no evidence of record that one of ordinary skill in the art would combine them. Accordingly, Applicants

respectfully submit that claims 1, 5, 7, 36 and 36-38 should be allowable for at least these reasons.

Further, as a result of the allowance of independent claims 1, Applicants respectfully further request rejoinder and allowance of claims 8 and 37, withdrawn claims, which depend on allowable independent claim 1, for at least the reasons set forth above.

Reconsideration and withdrawal of this rejection is respectfully requested.

### CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the rejection and allowance of each of claims 1, 5-14, 17-18, 26-34, and 36-38 in connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By

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